

REMARKS

Reconsideration of the outstanding Office Action is respectfully solicited.

Pursuant to 37 CFR 1.121(b) "marked-up" versions of the specification changes at pages 6, 7, 11 and 20 are attached hereto. In each paragraph which was amended, the phrase "Fig. 1" was replaced by --the Figure--. This is in response to the Examiner's request for conformance of the designation on the drawing with the recitations in the specification. Accordingly, it is believed that the Examiner's criticism's of the specification are moot.

Applicants respectfully traverse the rejection of claims of the instant patent under 35 U.S.C. 112.

Page 6 line 15 et seq provides basis for the amendment of claim 4. Claim 1 was amended to move the recitation "are having photocatalytic activity". Claims 4 and 13-16 were amended with respect to the syntax of the Markush groups. Claim 7 has been amended to claimfy the "coating solution and remove"it". Claims 19 and 20 have been amended to delete "the part of them".

Applicants respectfully traverse the rejection of claims of the instant patent application over WO/98/43733.

This reference WO/98/43733 does not constitute a reference under 35 U.S.C. 102(a) against the instant application. The reference has a publication date of October 8, 1998. That reference publication is later than the priority date of the instant application. The instant application has a priority date of November 7, 1997. Please see the NOTIFICATION OF ACCEPTANCE OF APPLICATION UNDER 35 USC 371..." Accordingly, withdrawal of the rejection is respectfully requested.

Applicants respectfully traverse the rejection of claims of the instant patent application over WO97/00314, under 35 U.S.C. 102(b). The WO97/00314 reference is not a printed publication available under 35 U.S.C. 102(b), which requires that the printed publication be available more than one year before the applicant'(s) U.S. effective filing date. The WO97/00314 reference has a printed publication date of January 1997. By comparison, the instant application has a priority date of November 1997. Accordingly, the reference is not appropriately applied under Section 102(b).

Moreover, the reference does not contain a description which constitutes an anticipatory disclosure, required for a rejection based on a lack of novelty. Please see section 2131 of the MANUAL OF PATENT EXAMINING PROCEDURE. Therein the MPEP encapsulates the law with respect to 'anticipation' case precedent. The reference applied as an anticipation must provide written description of each and every element of the claim under scrutiny.

The Kimura U.S. counterpart of WO97/00314 does not provide written description of each and every element of the rejected application claims. Kimura does not describe a laminate of a metal plate and photocatalyst supporting film, which is formed by heat-pressing. Moreover, Kimura does not describe the structural result which is embodied by the Figure of the application; the structre of the Figure in the instantly rejected application is the result of the method claims of the instant application, including Claims 1 and 18.

Reconsideration and an early allowance are respectfully solicited.

Respectfully submitted,



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MARKED UP COPY OF SPECIFICATION AMENDMENTS

Please replace the paragraph at page 6, bridging lines 4-16 by

--The metallic plate and the resin structure laminated with a photocatalyst-supporting film is prepared firstly by coating a coating solution for an adhesive layer containing a silane coupler as a hardening agent onto a film, for example a polymer resin film, then drying the coating solution, and subsequently coating a coating solution for a photocatalyst layer, then drying the coating solution for a photocatalyst layer to prepare a photocatalyst layer on the polymer resin film via an adhesive layer, and then laminating by heating and pressing the photocatalyst-supporting film onto the surface of the metallic plate or the resin structure. The cross section illustration for the inventive metallic plate and the resin structure laminated with the photocatalyst-supporting film is shown in Fig. 1 the Figure.

Please replace the paragraph at page 7, bridging lines 12-23 by

The photocatalyst-supporting polymer resin film of the present invention to be used for the lamination onto a metallic plate and a resin structure has a structure wherein an adhesive layer is provided in between the photocatalyst layer and the film, as shown in Fig. 1 the Figure. The adhesive layer is prepared by coating and then drying a coating solution for an adhesive layer onto the film, which has a role to firmly adhere a photocatalyst layer onto the film and prevents the deterioration of the activity of the photocatalyst caused by a plasticizer component spreading from the film or the polymer resin laminated with the film and degradation of the film due to photocatalytic effect, and the adhesive layer itself has a characteristic being resistant to the photocatalytic effect.

Please replace the paragraph at page 11, bridging lines 12-36 by

The photocatalyst-supporting polymer resin film according to the present invention to be used for lamination onto a metal plate and a resin substrate has a structure that an adhesive layer is provided on a photocatalyst layer, as shown in the Figure Fig. 1. The photocatalyst layer can be formed by coating a coating solution for photocatalyst layer which, for example, contains 1-10% by weight of metal oxide sol as solid component and 1-10% by weight of titanium dioxide sol as solid component and then drying the solution. The metal oxide sol contained in the coating solution for a photocatalyst layer works not only to fix the titanium dioxide sol and firmly adhere it to an adhesive layer but also to enhance photocatalytic activity owing to its absorption property based on the porous structure of the gel obtained by drying the metal oxide sol. Ratio of the metal oxide sol and the titanium dioxide sol in the coating solution for a photocatalyst layer is preferably in a range of from 25/75 to 95/5. Adhesion to the adhesive layer gets insufficient when the ratio of the metal oxide sol is less than 25%, whereas photocatalytic activity gets insufficient when the ratio is more than 95%. Further, when the specific surface area of the gel that is obtained by drying the metal oxide sol is $100\text{ m}^2/\text{g}$ or more, the adhesivity get more firm as well as improvement in the photocatalytic activity. For an example of the metal in the metal oxide sol, silicon, aluminium, titanium, zirconium, magnesium, niobium, tantalum and tungsten are preferably given, and mixtures of these metal oxide sol and complex oxide sols prepared by coprecipitation method, etc. can be used as well.

Please replace the paragraph at page 20, bridging lines 11-15 by

Brief Description of Drawings

The Figure Fig. 1 is a model diagram for a cross section of a metal body and a resin structure laminated with the photocatalyst-supporting film according to the present invention.

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